The second limitation of this study involves the possibility of recall bias. Recall bias occurs when individuals with a particular exposure or poor health outcome, such as having a very low birth weight infant, are likely to remember their experiences differently from those who are not similarly affected. In this study, mothers who were highly depressed at the time the survey was completed may have had a tendency to over-report the number of stressful events that actually occurred. On the other hand, mothers who were "not at all depressed" may have had a tendency to recall a fewer number of events than actually occurred. This bias would result in our findings overstating the effect of the amount of reported stress on the risk of PPD.

The relationship between maternal job loss (where the mother wanted to continue working) and the onset of PPD cannot be explained only by the chronic stress of being poor. In this study, we controlled for low socioeconomic status while examining the impact of stressful events. In another study it was suggested that the relationship of maternal unemployment and subsequent postnatal depression may "reflect the isolation [e.g., loss of contact with co-workers] and low self-esteem of non-working mothers, or the substantial role change for women who following childbirth have no future employment planned."[19]

Consistent with the proposed theory of unemployment and subsequent isolation, we found that unemployed mothers had less social support available to them than mothers not in this group. For example, among the study population of all unmarried mothers (n=842), 24 percent of unemployed mothers reported that there was *no one* available to help care for their new infant, compared to 13 percent for the remaining sample of unmarried mothers.

We found a significantly elevated risk for postpartum depression among mothers who reported being physically abused during pregnancy. In addition to bearing the strain of physical abuse, these mothers tend to encounter many other forms of stress during pregnancy. Abused mothers were significantly more likely than all other control groups to report six or more stressful events in the 12 months before delivery. Similarly, 16 percent of abused mothers, compared to six percent of non-abused mothers, reported losing their jobs **and** being unable to pay bills. As evident from these findings, as well as findings from other studies, the risk of depression among abused mothers is increased by the fact that many of these mothers experience many other stressors in their lives in addition to the abuse.

We also found a higher risk of PPD among mothers with very low birth weight infants. These babies are more likely to be sick and require extensive medical intervention than normal weight babies. The added strain of caring for these fragile infants may increase the risk of PPD.[20]

It is estimated that postpartum depression is treated in as few as 10 percent of affected mothers.[21] Failure to seek treatment may result, in part, from mothers dismissing or discounting their depression in view of the enormous physiological and psychological changes associated with childbirth.[22] Maternal postpartum depression is also incongruent with the usual expectations of joy surrounding the birth of a new baby.

The suffering caused from postpartum depression could be alleviated through improved health education. Pregnant women should be routinely advised of the signs and symptoms of postpartum depression, including the differences between depression and the more prevalent and benign "maternity blues." Postpartum depression is also under-diagnosed. Health care providers need to better informed of the clinical features of postpartum depression and the need for referral to appropriate mental health services.

Acknowledgements

The author wishes to thank Drs. Paul Buescher (SCHS), Sandy Martin (UNC, School of Public Health), and Indu Ahluwalia (CDC, Atlanta) for their valuable contributions to this study.